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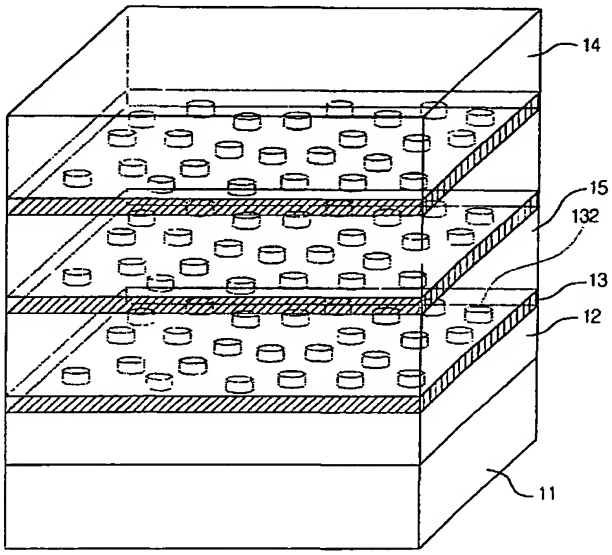
(54) Title: LED AND FABRICATION METHOD THEREOF



(57) Abstract: Disclosed is a quantum-dot LED and fabrication method thereof. The quantum-dot LED includes: a substrate; a n-type semiconductor layer formed on the substrate; an insulator layer formed on the n-type semiconductor layer and provided with a plurality of holes; quantum dots formed by filling the holes; and a p-type semiconductor layer formed on the insulator layer in which the quantum dots are formed. According to the inventive LED, the size and density of the quantum dots are controllable to thereby make the property control of the LED easy. Also, since it can be anticipated that the LED has a high internal quantum efficiency compared with the conventional LED using quantum well, high light emitting efficiency can be obtained.

WO 2004/054006 A1